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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,103	08/10/2006	Luca Toncelli	SAIC 22.706 (100788-00120)	5787
26304 7590 05/10/2010 KATTEN MUCHIN ROSENMAN LLP 575 MADISON AVENUE NEW YORK, NY 10022-2585			EXAMINER KENNEDY, TIMOTHY J	
			ART UNIT 1791	PAPER NUMBER
			MAIL DATE 05/10/2010	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/589,103	Applicant(s) TONCELLI, LUCA	
	Examiner TIMOTHY KENNEDY	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4,5,9,10 and 12-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4, 5, 9, 10, and 12-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. By way of the amendment filed in the RCE dated 3/18/2010: claims 1-3, 6-8, and 11 are cancelled, claims 4, 5, 10, 13, and 14 were previously presented, claims 9 and 12 are amended, and claims 15-18 are new.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 4, 9, 10, and 12-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toncelli (EP 0786325: already of record), in view of Maier et al (U.S. PGPub 2005/0022914: already of record, herein Maier), Brown (U.S. Patent 2,388,824: already of record), Hedstrom (DE 2309183, with Derwent Abstract: already of record), and Takemura (U.S. PGPub 2003/0235939). Regarding claim 9, Toncelli teaches:

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5. Mixing stone materials of predetermined particle size with a binder consisting of organic resins to produce a mix (Figure 1 part 26, Abstract, column 5, lines 18-20)
6. Distributing the mix inside a tray mould to form a mix layer (Figure 1 part 30, Abstract, column 5 lines 18-23)
7. Vacuum vibro-compacting the mix layer to obtain a compacted sheet (column 6, lines 7-14)
8. Hardening the binder by heating in an oven in order to obtain the finished products (Figure 1 part F and column 6, lines 15-21)
9. Toncelli does not teach:
10. Using electromagnetic radiofrequency waves having a frequency of less than 300 MHz to dielectrically preheat the compacted sheet to a temperature less than the temperature where catalysis of the binder starts. Toncelli is also silent to using a separate pre heating oven from the curing oven.
11. In the same field of endeavor Maier teaches using 0.5 to 100 MHz radio waves to preheat rubber (paragraph 0020-0021), but is silent as to why a skilled artisan would preheat with radio waves.
12. In the same field of endeavor Brown teaches preheating, using a high frequency electric field, resins before curing to ensure that the entirety of the mass is at a certain temperature so that the proper cure state can be achieved (left column, page 1, lines 20-41). Brown also teaches that the frequency and intensity of the dielectric preheating should be determined by the nature and bulk of the material, as well as allowing enough time for the temperature to approach the curing point (left column, page 2, lines 14-25)

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13. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the preheating frequencies as taught by Maier, for the reason as taught by Brown using the Toncelli process, since the preheating allows for a more even cure.

14. Toncelli, Maier, and Brown are silent to reaching a temperature less than the temperature where catalysis.

15. In the same field of endeavor Hedstrom teaches preheating curable glue to a temperature below its curing temperature so as to remove trapped solvents in the glue. This shortens the total processing time, thus saving money.

16. However Toncelli, Maier, Brown, and Hedstrom are silent as to the temperature used. However, since Brown teaches that the frequency and intensity of the dielectric preheating is based on the material worked upon, one having ordinary skill in the art would find it obvious to be able to determine what temperature is needed to preheat the material; this is further supported by Brown, since Brown teaches preheating to temperature approaching the curing temperature.

17. Finally regarding claim 9, Toncelli, Brown, and Hedstrom do not teach the separate preheating oven and curing oven.

18. In the same field of endeavor of preheating and curing, Takemura teaches pre heating in a separate oven form the curing oven (Figure 1, parts 32 and 36 and paragraph 0039)

19. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the separate oven as taught by Takemura, using the

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Toncelli, Brown, and Hedstrom method, since a separate preheating oven allows for removal of certain components that could interfere with the curing.

20. Regarding claims 4 and 10:

21. See remarks regarding claim 9 with regards to the preheating temperature.

22. Regarding claim 12:

23. See remarks regarding claim 9.

24. Regarding claim 13:

25. See remarks regarding claim 9.

26. Regarding claim 14, Brown for the previously stated reasons teach:

27. Step (c) is performed using means to generate electromagnetic waves having a frequency of between 25 and 35 MHz in the intermediate station.

28. See remarks regarding the Brown reference with regards to claim 9.

29. Regarding claims 15 and 16:

30. See remarks regarding claim 9 and the teachings of Toncelli (vacuum vibro-compaction) and Brown. The length of time that steps c and c are performed is obvious to try since there are only three possible combinations. One: compaction is longer than pre heating, two: compaction and preheating are equal, and three: compaction is shorter than preheating. It has been shown that a person of ordinary skill has good reason to pursue the known options in their art. If this lead to an anticipated success, it is likely that it was not due to innovation but of ordinary skill and common sense. *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1397 (2007). Furthermore, the amount of time that steps c and d are performed are variables well within the abilities of

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a skilled artisan. The time it takes to compact a material is inherently a result effective, since it is dependent on the material properties, and the desired final density. The preheating has already been discussed above, see remarks regarding claim 9.

31. Regarding claim 17 and 18:

32. The continuous production for producing multiple sheets is shown by the teachings of Toncelli, the additional process added on by the above secondary references would not alter the continuous nature of the Toncelli process.

33. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toncelli, Brown, Hedstrom, and Takemura as applied to claim 9 above, and further in view of Toncelli (WO 03/089189, herein after referred to as Toncelli WO). Regarding claim 5, Toncelli and Brown do not teach:

34. A mix which contains granulates of the expanded type.

35. In the same field of endeavor Toncelli WO teaches the use of expanded clay in the mixture (page 6, lines 16-21).

36. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the expanded granulates as taught by Toncelli WO, using the previous process of , Brown, Hedstrom, and Takemura since doing so would allow for good vibration damping capacity and lower the weight of the final product (page 6, lines 20-21)

Response to Arguments

37. Applicant's arguments, filed 3/18/2010, have been considered but are moot in view of the new ground(s) of rejection.

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38. Once again the Applicant is taking the Brown reference out of context of the 103(a) rejection, as in previous arguments. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The Brown reference is used solely for preheating, not compacting, since Toncelli explicitly teaches vacuum vibrocompacting. Further Brown explains why a skilled artisan would want to use a preheating step in a process as taught by Toncelli.

39. Regarding the Applicant's reasoning why Brown teaches away:

40. Applicant argues that the combination teaches away from the instant invention, since Brown takes the compacting step out of order.

41. The selection of any order of performing process steps is prima facie obvious in the absence of new or unexpected results. The Applicant has not provided a showing as to why preheating before compacting would not produce the same result as compacting then preheating (See MPEP 2144.04 IV C).

42. Finally Applicant argues that the applied references do not teach preheating to a temperature less than the catalysis temperature.

43. The Examiner will agree that the Brown reference teaches preheating to a catalysis temperature, and for that reason the Hedstrom reference was applied. This is due to the fact that Hedstrom gives explicit motivation as to why a skilled artisan would want to preheat to a temperature less than the catalysis temperature.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMOTHY KENNEDY whose telephone number is (571) 270-7068. The examiner can normally be reached on Monday to Friday 9:00am to 6:00pm (Personal fax number 571-270-8068).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Del Sole can be reached on (571) 272-1130. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

tjk

/Joseph S. Del Sole/
Supervisory Patent Examiner, Art Unit 1791